

## **Human Immunodeficiency Virus (HIV) Disease**

Agent: Human Immunodeficiency Virus (retrovirus)

Mode of transmission: Person-to-person via unprotected sexual intercourse, use of contaminated needles, blood transfusions and transplants with organs from infected donors, from mother-to-child before or during birth or through breastfeeding, or contact of cut or abraded skin with body secretions carrying the virus.

Signs/Symptoms: Initial infection with HIV can cause an acute illness or fever, muscle pain, enlarged lymph nodes, and/or a rash which occurs approximately 2-4 weeks post-exposure; however, a person can be asymptomatic for several years. When the immune system is affected, the infection develops into AIDS.

Prevention: Preventive measures include safe sexual practices, such as consistent condom use; routine HIV/STD testing; antiretroviral medication as prevention including: pre-exposure prophylaxis (PrEP), post-exposure prophylaxis (PEP), and non-occupational post-exposure prophylaxis (nPEP) (for more information about PrEP, PEP and nPEP, please see: <http://www.vdh.virginia.gov/disease-prevention/disease-prevention/prep-and-npep/>); not sharing or reusing needles or syringes; among all HIV-infected persons, taking and adhering to antiretroviral therapy regimens to maintain viral suppression and prevent transmission to partners; screening of blood and plasma; and among infected mothers, cesarean delivery before labor, and avoidance of breastfeeding.

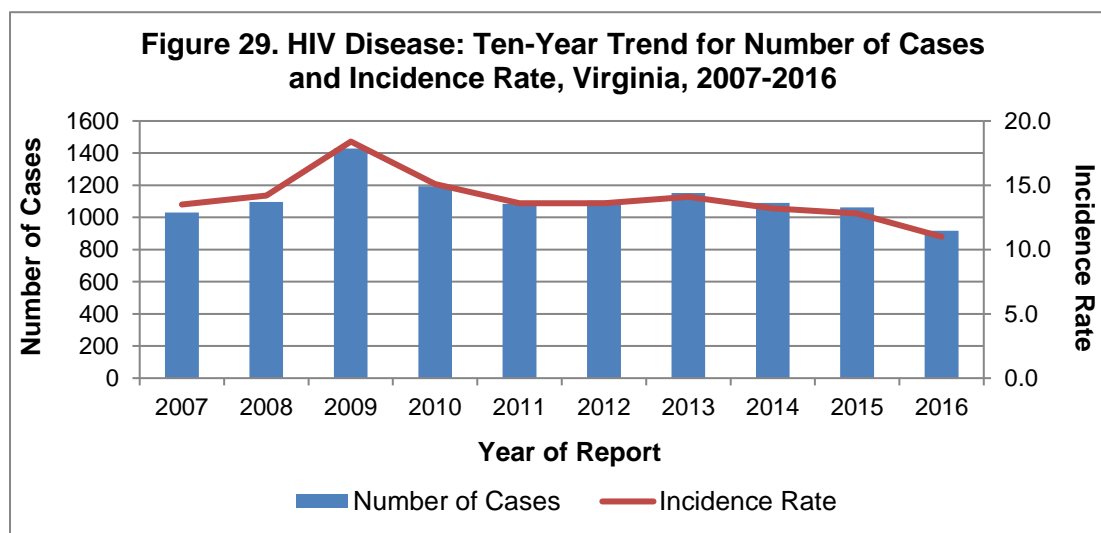
Other Important Information: Data analysis methods for HIV/AIDS were changed in 2009. Statistics are presented for HIV disease rather than HIV and AIDS as separate conditions, as explained below. More detailed epidemiologic analyses of HIV/AIDS, as well as other sexually transmitted infections, can be found at the following website address: <http://www.vdh.virginia.gov/disease-prevention/sexually-transmitted-diseases-std-surveillance-operations-data-administration/hiv-data-statistics/>. Rapid tests (which provide results within 30 minutes) are becoming more widely available and are used at various testing sites in Virginia. For more information, call your local health department, or contact the Virginia Department of Health HIV/STD/Viral Hepatitis Hotline at 1-800-533-4148.

<b>HIV Disease: 2016 Data Summary</b>	
Number of Cases:	918
5-Year Average Number of Cases:	1,098.6
% Change from 5-Year Average:	-16%
Incidence Rate per 100,000:	11.0

### **Change in Epidemiologic Analyses of HIV Disease**

Beginning in 2009, VDH reassessed the way HIV and AIDS surveillance data were reported in order to better illustrate the epidemic in Virginia. Instead of approaching HIV and AIDS as two separate conditions of the same disease, it was found to be more helpful for epidemiologic and community planning purposes to evaluate all HIV and AIDS cases as one encompassing group: persons diagnosed or living with HIV disease. Before 2009, cases that were reported as having an AIDS-defining condition were excluded from the

count of newly diagnosed HIV infections. Due to this change in methodology from previous years, those calculations pre-2009 are not comparable to calculations from 2009 and later, where HIV and AIDS are treated as one disease without considering disease progression. Currently, any case that presents as having HIV or an AIDS-defining condition at the time of diagnosis is considered a newly diagnosed HIV disease case. It is not considered an incident case, however, as the person may have had HIV for a significant time prior to diagnosis. Figure 29 below displays the trend in new HIV diagnoses when the current methodology is applied to the entire 2007-2016 period. For a more thorough discussion of the changes in the analysis of HIV and AIDS surveillance data, please refer to the website address listed in the “Other Important Information” section above.



## HIV Disease

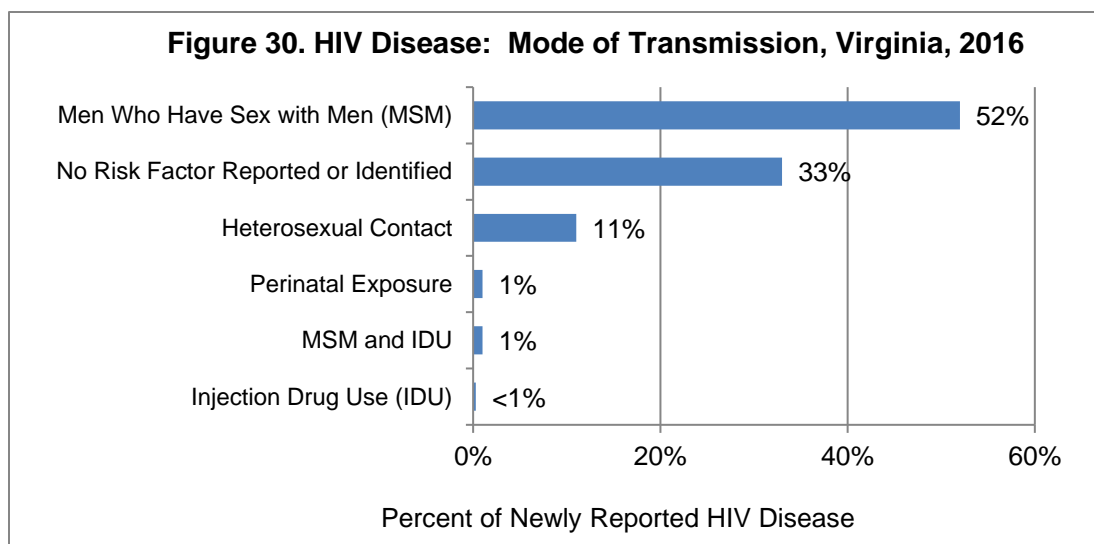
In 2016, 918 cases of HIV disease were reported in Virginia, as illustrated in Figure 29. On average, there were 1,098.6 new cases per year from 2011 to 2015, reflecting the stability of new HIV disease diagnoses over the last several years. The statewide incidence rate of new HIV diagnoses was 11.0 per 100,000 in 2016.

The highest HIV incidence rates in 2016 occurred among the 20-29 year age group (32.9 per 100,000), followed by the 30-39 year age group (30.7 per 100,000). The 20-29 year age group has consistently experienced the highest incidence rate of new diagnoses since 2007 and represented 40% of all new diagnoses reported in 2016. When combining the two age groups, approximately 65% of all new HIV diagnoses in 2016 were among persons aged 20-39 years. Incidence rates among the black, non-Hispanic population and Hispanic/Latino population were higher than their white, non-Hispanic population counterparts in 2016. The black, non-Hispanic and Hispanic/Latino populations were approximately eight and four times more likely than the white, non-Hispanic population to be newly diagnosed with HIV in 2016. Overall, HIV incidence rates by race/ethnicity have

remained relatively stable over the past few years. Males have consistently shown higher incidence rates of HIV disease compared to females over time, and males were nearly five times more likely than females to be diagnosed with HIV disease in 2016 (18.4 and 3.7 per 100,000, respectively).

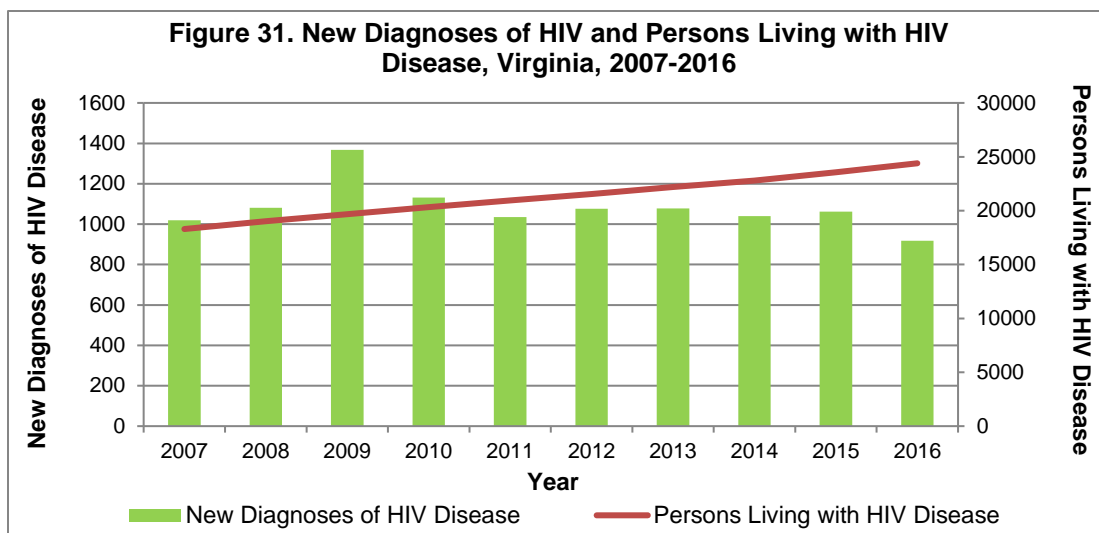
Among the five regions in Virginia, the highest incidence rate in 2016 was observed in the eastern region, with 17.5 cases per 100,000, followed by the central region at 15.3 cases per 100,000. The lowest HIV incidence rate (4.4 per 100,000) occurred in the southwest region. Incidence by locality can be seen in the map below.

In 2016, men who have sex with men (MSM) was the most frequently reported transmission risk category for HIV disease, representing 52% of new cases in Virginia (Figure 30). Among identified MSM cases, 51% were 20-29 years of age at diagnosis and 57% were black, non-Hispanic. Eleven percent of newly diagnosed cases for 2016 were attributed to heterosexual contact. No specific risk factors for transmission were reported or identified for 33% of newly diagnosed HIV cases in 2016.

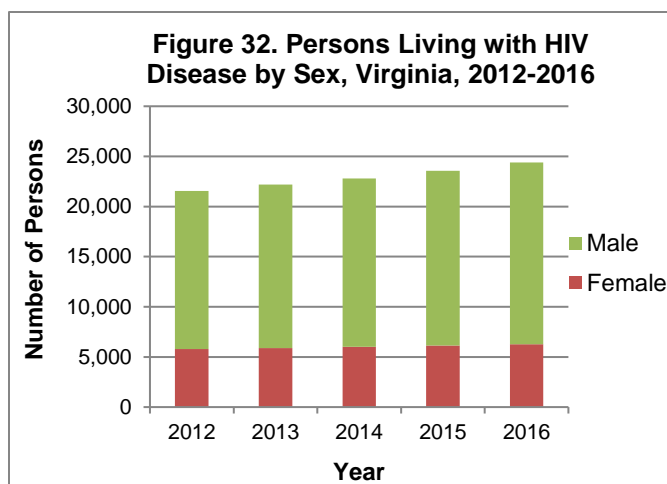


## Persons Living with HIV Disease

Due to advances in medical therapies and care strategies, the number of persons living with HIV disease (PLWH) has continued to increase. As of December 31, 2016, there were 24,396 persons known to be living with HIV disease in Virginia (Figure 31).



Approximately three-quarters of PLWH are male (Figure 32). In addition, 55% of PLWH were between 40-59 years of age as of December 31, 2016. Among PLWH, 59% were black, non-Hispanic and 47% were attributed to male-to-male sexual contact, 19% to heterosexual contact, and 8% to injection drug use. The highest rates of PLWH were in the central and eastern regions with 412.2 and 402.4 cases per 100,000, respectively. The lowest rate of PLWH was in the southwest region with 149.9 cases per 100,000. Approximately 47% of those living with HIV disease were also diagnosed with an AIDS-defining condition.



## HIV Disease Incidence Rate by Locality Virginia, 2016

